

## CHAPTER II

Preliminary Classification:

Proposed Class:

Subclass:

NOTE: "All applicants are requested to include a preliminary classification on newly filed patent applications. The preliminary classification, preferably class and subclass designations, should be identified in the upper right-hand corner of the letter of transmittal accompanying the application papers, for example 'Proposed Class 2, subclass 129.' " M.P.E.P. Section 601, 7th ed.

TRANSMITTAL LETTER  
TO THE UNITED STATES ELECTED OFFICE (EO/US)

## (ENTRY INTO U.S. NATIONAL PHASE UNDER CHAPTER II)

PCT/US05/000753	11 January 2005	60/539,409	27 January 2004
INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY	DATE CLAIMED

## PROCESS FOR REMOVING MICROBUBBLES FROM A LIQUID

TITLE OF INVENTION

Larry Yen, Jay Duffner and Saksatha Ly

APPLICANT(S)

## CERTIFICATION UNDER 37 C.F.R. SECTION 1.10\*

(Express Mail label number is **mandatory**.)(Express Mail certification is **optional**.)

I hereby certify that this correspondence and the documents referred to as attached therein are being deposited with the United States Postal Service on this date 7/13/06, in an envelope as "Express Mail Post Office to Addressee," Mailing Label Number EV747249157US, addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

Noreen Buckley

(type or print name of person mailing paper)

Signature of person mailing paper

**WARNING:** Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. Section 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

**\*WARNING:** Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. Section 1.10(b).  
"Since the filing of correspondence under [Section] 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will **not** be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

**Box PCT**  
**Commissioner for Patents**  
**Alexandria, Virginia 22313-1450**  
**ATTENTION: EO/US**

*NOTE: To avoid abandonment of the application, the applicant shall furnish to the USPTO, not later than 20 months from the priority date: (1) a copy of the international application, unless it has been previously communicated by the International Bureau or unless it was originally filed in the USPTO; and (2) the basic national fee (see 37 C.F.R. Section 1.492(a)). The 30-month time limit may not be extended. 37 C.F.R. Section 1.495.*

*WARNING: Where the items are those which can be submitted to complete the entry of the international application into the national phase are subsequent to 30 months from the priority date the application is still considered to be in the international state and if mailing procedures are utilized to obtain a date the express mail procedure of 37 C.F.R. Section 1.10 must be used (since international application papers are not covered by an ordinary certificate of mailing - See 37 C.F.R. Section 1.8.*

*NOTE: Documents and fees must be clearly identified as a submission to enter the national state under 35 USC 371 otherwise the submission will be considered as being made under 35 U.S.C. Section 111. 37 C.F.R. Section 1.494(f).*

1. Applicant herewith submits to the United States Elected Office (EO/US) the following items under 35 U.S.C. 371:
  - a. ☒ This express request to immediately begin national examination procedures (35 U.S.C. Section 371(f)).
  - b. ☒ The U.S. National Fee (35 U.S.C. Section 371(c)(1)) and other fees (37 C.F.R. Section 1.492) as indicated below:

2020.01.13 13:51:29

## 2.Fees

CLAIMS FEE	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
[ X ]*	TOTAL CLAIMS	22-20 =	2	x \$ 50.00 =	\$ 100.00
	INDEPENDENT CLAIMS	3- 3 =	3	x \$ 200.00 =	\$ 0
	MULTIPLE DEPENDENT CLAIM(S) (if applicable) + \$270.00				\$
BASIC FEE**	[ X ] U.S. PTO WAS INTERNATIONAL PRELIMINARY EXAMINATION AUTHORITY Where an International preliminary examination fee as set forth in Section 1.482 has been paid on the international application to the U.S. PTO: [ ] and the international preliminary examination report states that the criteria of novelty, inventive step (non-obviousness) and industrial activity, as defined in PCT Article 33(2) to (4) have been satisfied for all the claims presented in the application entering the national stage (37 C.F.R. Section 1.492(a)(4)) ..... \$100.00 [ X ] and the above requirements are not met (37 C.F.R. Section 1.492(a)(1)) ..... \$690.00  [ ] U.S. PTO WAS NOT INTERNATIONAL PRELIMINARY EXAMINATION AUTHORITY Where no international preliminary examination fee as set forth in Section 1.482 has been paid to the U.S. PTO, and payment of an international search fee as set forth in Section 1.445(a)(2) to the U.S. PTO: [ ] has been paid (37 C.F.R. 1.492(a)(2)) ..... \$710.00 [ ] has not been paid (37 C.F.R. 1.492(a)(3)) ..... \$1,000.00 [ ] where a search report on the international application has been prepared by the European Patent Office or the Japanese Patent Office (37 C.F.R. Section 1.492(a)(5)) ..... \$860.00				690.00
	Total of above Calculations				=790.00
SMALL ENTITY	Reduction by 1/2 for filing by small entity, if applicable. Affidavit must be filed. (note 37 C.F.R. Sections 1.9, 1.27, 1.28)				-
	Subtotal				790.00
	Total National Fee				\$790.00
	Fee for recording the enclosed assignment document \$40.00 (37 C.F.R. 1.21(h)). (See Item 13 below). See attached "ASSIGNMENT COVER SHEET".				\$
TOTAL	Total Fees enclosed				\$790.00

\* See attached Preliminary Amendment Reducing the Number of Claims.

- 20/03/2006  
AP20 Rec'd 13 JUL 2006
- i. ☐ A check in the amount of \_\_\_\_\_ to cover the above fee is enclosed.
- ii. ☒ Please charge Account No. 501-908 in the amount of \$ 790.00.  
A duplicate copy of this sheet is enclosed.

**\*\* WARNING:** *"To avoid abandonment of the application the applicant shall furnish to the United States Patent and Trademark Office not later than the expiration of 30 months from the priority date: \* \* \* (2) the basic national fee (see Section 1.492(a)). The 30-month time limit may not be extended." 37 C.F.R. Section 1.495(b).*

**WARNING:** *If the translation of the international application and/or the oath or declaration have not been submitted by the applicant within thirty (30) months from the priority date, such requirements may be met within a time period set by the Office. 37 C.F.R. Section 1.495(b)(2). The payment of the surcharge set forth in Section 1.492(e) is required as a condition for accepting the oath or declaration later than thirty (30) months after the priority date. The payment of the processing fee set forth in Section 1.492(f) is required for acceptance of an English translation later than thirty (30) months after the priority date. Failure to comply with these requirements will result in abandonment of the application. The provisions of Section 1.136 apply to the period which is set. Notice of Jan. 3, 1993, 1147 O.G. 29 to 40.*

3. ☒ A copy of the International application as filed (35 U.S.C. Section 371(c)(2)):

**NOTE:** *Section 1.495 (b) was amended to require that the basic national fee and a copy of the international application must be filed with the Office by 30 months from the priority date to avoid abandonment "The International Bureau normally provides the copy of the international application to the Office in accordance with PCT Article 20. At the same time, the International Bureau notifies applicant of the communication to the Office. In accordance with PCT Rule 47.1, that notice shall be accepted by all designated offices as conclusive evidence that the communication has duly taken place. Thus, if the applicant desires to enter the national stage, the applicant normally need only check to be sure the notice from the International Bureau has been received and then pay the basic national fee by 30 months from the priority date." Notice of Jan. 7, 1993, 1147 O.G. 29 to 40, at 35-36. See item 14c below.*

- a. ☐ is transmitted herewith.
- b. ☒ is not required, as the application was filed with the United States Receiving Office.
- c. ☐ has been transmitted
- i. ☐ by the International Bureau.  
Date of mailing of the application (from form PCT/IB/308): \_\_\_\_\_
- ii. ☐ by applicant on \_\_\_\_\_  
Date

4. ☒ A translation of the International application into the English language (35 U.S.C. Section 371(c)(2)):
- a. ☐ is transmitted herewith.
- b. ☒ is not required as the application was filed in English.
- c. ☐ was previously transmitted by applicant on \_\_\_\_\_  
Date
- d. ☐ will follow.

5. ☐ Amendments to the claims of the International application under PCT Article 19 (35 U.S.C. Section 371(c)(3)):

APR 10 13 JUL 2005

*NOTE: The Notice of January 7, 1993 points out that 37 C.F.R. Section 1.495(a) was amended to clarify the existing and continuing practice that PCT Article 19 amendments must be submitted by 30 months from the priority date and this deadline may not be extended. The Notice further advises that: "The failure to do so will not result in loss of the subject matter of the PCT Article 19 amendments. Applicant may submit that subject matter in a preliminary amendment filed under Section 1.121. In many cases, filing an amendment under Section 1.121 is preferable since grammatical or idiomatic errors may be corrected." 1147 O.G. 29-40, at 36.*

- a. ☐ are transmitted herewith.
  - b. ☐ have been transmitted
    - i. ☐ by the International Bureau.  
Date of mailing of the amendment (from form PCT/IB/308): \_\_\_\_\_.
    - ii. ☐ by applicant on \_\_\_\_\_.  
Date
  - c. ☒ have not been transmitted as
    - i. ☒ applicant chose not to make amendments under PCT Article 19.  
Date of mailing of Search Report (from form PCT/ISA/210): \_\_\_\_\_.
    - ii. ☐ the time limit for the submission of amendments has not yet expired. The amendments or a statement that amendments have not been made will be transmitted before the expiration of the time limit under PCT Rule 46.1.
6. ☒ A translation of the amendments to the claims under PCT Article 19 (38 U.S.C. Section 371(c)(3)):
- a. ☐ is transmitted herewith.
  - b. ☐ is not required as the amendments were made in the English language.
  - c. ☒ has not been transmitted for reasons indicated at point 5(c) above.
7. ☒ A copy of the international examination report (PCT/IPEA/409)  
☒ is transmitted herewith.  
☐ is not required as the application was filed with the United States Receiving Office.
8. ☒ Annex(es) to the international preliminary examination report
- a. ☐ is/are transmitted herewith.
  - b. ☒ is/are not required as the application was filed with the United States Receiving Office.
9. ☒ A translation of the annexes to the international preliminary examination report
- a. ☐ is transmitted herewith.
  - b. ☒ is not required as the annexes are in the English language.

10. ☒ An oath or declaration of the inventor (35 U.S.C. Section 371(c)(4)) complying with 35 U.S.C. 115
- a. ☐ was previously submitted by applicant on \_\_\_\_\_  
Date
- b. ☒ is submitted herewith, and such oath or declaration
- i. ☐ is attached to the application.
- ii. ☒ identifies the application and any amendments under PCT Article 19 that were transmitted as stated in points 3(b) or 3(c) and 5(b); and states that they were reviewed by the inventor as required by 37 C.F.R. Section 1.70.
- c. ☐ will follow.

Other document(s) or information included:

11. ☒ An International Search Report (PCT/ISA/210) or Declaration under PCT Article 17(2)(a):
- a. ☒ is transmitted herewith.
- b. ☐ has been transmitted by the International Bureau.  
Date of mailing (from form PCT/IB/308): \_\_\_\_\_.
- c. ☐ is not required, as the application was searched by the United States International Searching Authority.
- d. ☐ will be transmitted promptly upon request.
- e. ☐ has been submitted by applicant on \_\_\_\_\_  
Date
12. ☒ An Information Disclosure Statement under 37 C.F.R. Sections 1.97 and 1.98:
- a. ☒ is transmitted herewith.  
Also transmitted herewith is/are:
- ☒ Form PTO-1449 (PTO/SB/08A and 08B).
- ☒ Copies of citations listed.
- b. ☐ will be transmitted within THREE MONTHS of the date of submission of requirements under 35 U.S.C. Sections 371(c).
- c. ☐ was previously submitted by applicant on \_\_\_\_\_  
Date
13. ☐ An assignment document is transmitted herewith for recording.

A separate ☐ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or ☐ FORM PTO 1595 is also attached.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

14. ☒ Additional documents:
- a. ☒ Copy of request (PCT/RO/101)
- b. ☒ International Publication No. WO 2005/072487 A2
- i. ☒ Specification, claims and drawing
- ii. ☐ Front page only
- c. ☐ Preliminary amendment (37 C.F.R. Section 1.121)
- d. ☒ Other

PCT/IB/306 – Notification of the Recording of a Change,  
Copy of Request

15. ☒ The above checked items are being transmitted
- a. ☒ before 30 months from any claimed priority date.
- b. ☐ after 30 months.
16. ☐ Certain requirements under 35 U.S.C. 371 were previously submitted by the applicant on \_\_\_\_\_, namely:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

#### AUTHORIZATION TO CHARGE ADDITIONAL FEES

**WARNING:** *Accurately count claims, especially multiple dependent claims, to avoid unexpected high charges if extra claims are authorized.*

**NOTE:** *"A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under Section 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in Section 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 C.F.R. Section 1.136(a)(3).*

**NOTE:** *"Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 C.F.R. Section 1.26(a).*

- ☒ The Commissioner is hereby authorized to charge the following additional fees that may be required by this paper and during the entire pendency of this application to Account No. 501-908.

☒ 37 C.F.R. Section 1.492(a)(1), (2), (3), and (4) (filing fees)

807286960

**WARNING:** *Because failure to pay the national fee within 30 months without extension (37 C.F.R. Section 1.495(b)(2)) results in abandonment of the application, it would be best to always check the above box.*

☒ 37 C.F.R. Section 1.492(b), (c) and (d) (presentation of extra claims)

**NOTE:** *Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims cancelled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 C.F.R. Section 1.492(d)), it might be best not to authorize the PTO to charge additional claim fees, except possible when dealing with amendments after final action.*

☒ 37 C.F.R. Section 1.17 (application processing fees)

☒ 37 C.F.R. Section 1.17(a)(1)-(5)(extension fees pursuant to Section 1.136(a).

☐ 37 C.F.R. Section 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. Section 1.311(b))

**NOTE:** *Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 C.F.R. Section 1.311(b).*

**NOTE:** *37 C.F.R. 1.28(b) requires "Notification of any change in loss of entitlement to small entity status must be filed in the application . . . prior to paying, or at the time of paying . . . issue fee." From the wording of 37 C.F.R. Section 1.28(b): (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.*

☐ 37 C.F.R. Section 1.492(e) and (f) (surcharge fees for filing the declaration and/or filing an English translation of an International Application later than 30 months after the priority date).

  
SIGNATURE OF PRACTITIONER

Timothy J. King

(type or print name of practitioner)

Entegris, Inc.

129 Concord Road

P.O. Address

Reg. No.: 38,204

Tel. No.: (978) 436-6582

Customer No.:

**\*29621\***

Billerica, MA 01821-4600

PATENT TRADEMARK OFFICE